7.0 Phase II
Research Design and Methodologies

7.0 PHASE II RESEARCH DESIGN AND METHODOLOGIES

7.1 Phase II Research Design

The Phase II archaeological investigation focused on Area 1, a 4.0-hectare parcel of plowed agricultural field located between SR 1, SR 12, and the Murderkill River; a 0.76-acre parcel comprising Area 2; a 0.28-hectare section of grassy field adjacent to the northern driveway entrance to the non-extant Soulie Gray House, designated Area 6; a 1.3-hectare section of plowed and fallow ground on the southeast side of an existing farm pond proposed for a stormwater management basin, designated Area 7; and a 3.76-hectare parcel of plowed field, part of the West Farm, designated Area 5. These parcels of ground were proposed by DelDOT to be developed with a roadway design that redirects northbound vehicular traffic on SR 12 across SR 1 via a bridge to the northbound lane of SR 1. Phase IB archaeological testing conducted during March and April 2004 identified prehistoric archaeological remains including FCR, subsurface features, and temporally diverse tools and ceramics, as well as an assortment of early- to mid-nineteenth- through twentieth-century domestic artifacts, in Area 1. In addition, the Phase IB survey noted variations in the soil stratigraphy across Area 1 suggestive of possible eolian deposition.

Testing in Area 2 produced an 80.0-meter by 40.0-meter scatter of brick, cut and wire nails, and window glass, with lesser quantities of mid-nineteenth- through twentieth-century ceramics and bottle glass along the northeastern edge of the Soulie Gray House site. Feature 1, a historic post mold, was also recorded in this artifact scatter. This concentration of architectural and domestic artifacts was located in an area where a large mid-twentieth-century concrete block and frame barn and a number of smaller, contemporaneous frame outbuildings, as well as potential mid-nineteenth- to early-twentieth-century outbuildings, once stood.

Phase IB archaeological testing conducted from March 28 to April 1, 2005 in Area 5 documented four different artifact concentrations. Locus 4, a 30.5-meter by 30.5-meter scatter of late eighteenth- through early-twentieth-century domestic and architectural debris, was recorded adjacent to the east side of SR 1. Locus 1, a 30.5-meter by 45.7-meter scatter composed of six pieces of debitage, was found in the plowzone horizon in the eastern portion of the tested parcel.

Locus 2, a 61.0-meter by 30.5-meter concentration of debitage, prehistoric ceramics, and historic refuse, was noted adjacent to Locus 4. One chert flake and one jasper flake were recovered from the E-horizon in STP N300 E700 and STP N300 E800, whereas the rest of the collection in Locus 2 was found in the plowzone horizon. Locus 3 consists of a 30.5-meter by 15.2-meter scatter of prehistoric debitage and historic artifacts located approximately 40.0 meters south of Locus 2.

Testing conducted in July 2005 in Area 6 recorded two historic deposits. A dense concentration of brick containing fragments of handmade brick and mid-eighteenth- to mid-twentieth-century architectural and domestic refuse was recorded at the western end of Area 6 near the farm ponds. This brick concentration was designated Feature 3 and left *in situ*. Excavations at the eastern end of Area 6 exposed a fill deposit containing a number of mid-nineteenth- through twentieth-century cut and wire nails, brick fragments, and corroded metal, along with a small selection of utilitarian household items such as ceramics and bottle and vessel glass. This fill episode is interpreted as part of a larger architectural and domestic artifact scatter identified in Area 2 associated with non-extant mid-twentieth-century outbuildings, as well as potential mid-nineteenth- to early-twentieth-century outbuildings. A 20.0- by 40.0-meter area of lithic debris was identified in the southeastern corner of Area 7. This prehistoric resource represents an isolated lithic acquisition site utilizing local water-worn gravels, and possibly serves as an activity area for the larger prehistoric site within the study area.

On November 29, 2005, members of A.D. Marble & Company, Century Engineering, DelDOT, and DESHPO met to discuss the results of the Phase I archaeological survey of the SR 1 Frederica Grade Separated Intersection project and the proposed Phase II Archaeological Investigation effort. Based on the agreement of DelDOT and DESHPO with the findings and recommendations of the draft Phase IB Management Summary Report (Emory 2004) for Areas 1 through 4; the update of fieldwork results and recommendations provided by A.D. Marble & Company at the meeting for Areas 5 through 8; and the Phase II workplan dated November 30, 2005; the Phase II Archaeological Investigation was limited to the following areas: (1) an approximately 1.25-hectare Limit of Disturbance (LOD) containing evidence of buried prehistoric features in Area 1; (2) an 80.0-meter by 40.0-meter scatter of mid-nineteenth- to mid-twentieth-century architectural and domestic refuse located in the area of mid-nineteenth- to mid-twentieth-century outbuildings in Areas 2 and 6; (3) an approximately 121.9-meter long by 45.7-meter wide section of Area 5 containing Locus 2, which was composed of a cluster of prehistoric artifacts; (4) a dense concentration of brick, designated Feature 3, and associated mid-eighteenth-through early-twentieth-century ceramics, bottle glass, cut and wire nails, and other debris at the western end of Area 6; and (5) a 20.0-meter by 40.0-meter area of lithic debris recorded in the southeastern corner of Area 7.

The purpose of the Phase II archaeological investigation was to document the horizontal and vertical distribution of the eolian deposits and cultural features within the APE, to characterize the function of the prehistoric and historic loci identified within the APE, and to determine the age of any cultural features in relation to prehistoric and historic occupation of the Murderkill River drainage.

Several research issues were to be addressed in the Phase II investigation. The first issue involved the interrelationship of the loci identified in Area 1. Based on the horizontal distribution and temporal characteristics of the projectile points and ceramic sherds collected from Area 1 in the Phase IB surface collection, it could be suggested that the earliest occupation of the landform took place in the northern limits of Area 1. Locus 1, representing a high density cluster of prehistoric artifacts found in the northern limits of Area 1, produced two Archaic to Woodland I projectile points and several ceramic sherds contemporaneous to the Woodland I period. Conversely, the prehistoric artifact assemblage recovered in the southern portion of Area 1, specifically in or adjacent to Loci 4, 5, and 6, produced diagnostic tools and ceramics associated with the Woodland I and II periods. Historic artifact clusters were noted in Loci 1, 2, 4, 5, and 6 as well, including a concentration of brick in Locus 5. Did the loci boundaries defined in the surface collection of Area 1 represent discrete activity areas? Did the horizontal distribution of the prehistoric and historic archaeological materials recovered from the surface collection accurately represent the temporal association(s) of each loci, or had the repeated plowing activities in Area 1 skewed the accuracy of the temporal markers?

On a larger scale, prehistoric archaeological deposits were recovered across the project study area, and not just in Area 1. A small concentration of prehistoric artifacts was identified in Area 2 (Locus 2) and in Area 7 northeast of the Soulie Gray Farm. In addition, a prehistoric/historic resource (7K-F-163B [K-6720]) was recorded adjacent to the east side of the farm pond, just north of the Soulie Gray House. It was suggested by the excavators that while these resources were physically separated from one another, they represented unique activity areas within one large site focused along a small spring-fed drainage that emptied into Spring Creek. Was there a relationship between a particular activity (lithic maintenance, household) and a topographical setting? How had the construction of SR 1 and the Soulie Gray Farm altered the landscape within the project study area and impacted prehistoric site preservation?

While it was evident from the limited archaeological testing that a significant period of prehistoric occupation took place within Area 1, the exact form of the site (e.g., seasonal camp, large village) and function (e.g., cooking, butchering, lithic maintenance) was unknown. A similar comparison could be drawn with the historic artifact collection and its association with the Soulie Gray Farm and the possible river landing. What were the functions of these loci, and what was the spatial relationship of these loci to each other and the immediate topographical setting? Through the formation of hypotheses concerning the function of the artifact classes, certain assumptions could be made concerning the types of features expected to be recovered, the size of the feature, and other key components of its composition. The archaeological investigation of the site would provide the physical data of the site that could be used to verify or refute the hypotheses.

The second research issue concerned the prehistoric artifact assemblage associated with Area 1. The excavation of the Robbins Farm #1 Site (7K-F-12) on the west side of SR 1, approximately 7.6 meters west of the current study area, uncovered a prehistoric storage refuse pit that contained Keyser Cord Marked and Potomac Creek wares, ceramic types traditionally found in western Maryland and northern Virginia. Two possible sherds of Potomac Creek ware were found in Area 1. What could the ceramic assemblage from the current study area and 7K-F-12 tell researchers about the lives of the Native American inhabitants occupying this small area? What could the ceramic assemblage tell researchers about the exchange network, or migration patterns, linking this prehistoric site in Kent County, Delaware, to contemporaneous prehistoric sites in the Chesapeake Bay region, or in the Piedmont region of Maryland? Was the prehistoric ceramic component in the current study area indicative of an isolated occupation, or part of a larger, interconnected series of occupations extending along the waterway?

The large assemblage of lithics recovered from Areas 1 and 2 consisted of jasper, chert, quartz, quartzite, rhyolite, and argillite material. Projectile points, scrapers, cutting tools, ground stone tools, grinding stones, shaft abraders, and a selection of other tool forms were recovered from Areas 1 and 2. The diverse assortment of diagnostic cultural materials would suggest a major processing site for plant and animal resources, as well as lithic maintenance activities. Additional archaeological analyses could provide evidence of organic remains (fauna and flora) and chemical signatures validating the processing site theory.

The third issue centered on the presence of eolian deposition and site preservation in Areas 1 and 2. A surface inspection and test unit excavations in Area 1 and 2 identified patches of gravel-rich Pleistocene deposits visible in the plowzone, while other areas exhibited a plowzone consisting of fine sand and silts lacking gravels. Prehistoric remains were recovered below the plowzone in the fine sand and silts episode. The gravel-rich portions of the project area produced historic and prehistoric materials in or near the plowzone.

The areas identified as fine sand and silts and greatly reduced gravel content in the plowzone were thought to represent the deposition of wind-blown sediments from eroded dune features. It was suggested that the eolian deposits could have acted as a blanket and preserved prehistoric archaeological deposits in a stratified context, while the gravel-rich Pleistocene deposits exposed near the surface were likely impacted by historic plowing activities. The Phase II archaeological investigation would delineate areas of possible eolian deposits and expose soil profiles within these areas. Could a correlation be drawn between soil types and the vertical integrity of the site based on the soil profiles and the cultural material assemblage recovered from each pedological context? Analysis of the soil types (sediment size, organic composition) could be helpful in distinguishing eolian sediments in the soil profile. What could the composition of the possible eolian deposits tell us about environmental conditions of the project area during the Holocene period?

Data collected about the prehistoric and historic resources during the Phase II investigation was used to determine the site's eligibility for inclusion in the National Register of Historic Places. Archaeological reports and surveys conducted within the Murderkill River drainage, as well as the St. Jones River drainage, were reviewed in conjunction with the archaeological excavations. In particular, additional intensive background research focused on the historic use of the project area. Preliminary research indicated that the Soulie Gray House occupied the study area since the middle of the nineteenth century. The 1859 Byles and the 1868 Beers maps indicated that a second structure, possibly representing an earlier domestic residence on the property, stood to the west of the Soulie Gray House, with the predecessor of SR 13 passing between the two buildings. In addition, it was suggested that a river landing may have been present along Spring Creek, used as a means of transportation and commercial enterprise for the residents of the farm. Detailed background research through chain-of-title, tax records, and other sources could provide information on the period of construction for the Soulie Gray House and the second structure to the west, as well as the presence of a river landing on Spring Creek. The information collected during historical background research and through a review of the characterizations of previously reported archaeological sites provided a context to be used to evaluate how the cultural features and artifacts identified in Areas 1, 2, 5, and 6 reflected early Native American and historic-period occupation and activities in the project area.

7.2 Phase II Methodologies

7.2.1 Field Methods

The Phase II fieldwork followed the methods prescribed in the Phase II workplan. To facilitate the report, the field methods for each area are described separately below.

<u>Area 1.</u> Prior to Phase II excavations, a 10.0-meter grid system utilized in the Phase IB Archaeological Survey was re-established across Area 1. To observe the geomorphological characteristics in Area 1 and adequately sample the Extended LOD for archaeological remains, two transects composed of 1.0-meter square test units were excavated across Area 1. These

transects were established along the centerline of the March 2005 alignment and in Column I. Each excavation was spaced at 30.0-meter intervals.

A total of 22 1.0-meter square excavation units was proposed within the LOD in Area 1. Four of these test units were placed on the centerline of the March 2005 alignment (N650 E619, N620 E589, N580 E562, and N559 E545) and two test units in Column I (N590 E589 and N650 E589). Three additional test units (N630 E628, N604 E570, N610 E610) were placed in the LOD at the discretion of the Principal Investigator and geomorphologist to bracket test units on the centerline and Column I transects. The primary function of these excavation units was to assist in determining the vertical, horizontal, and temporal extent of the possible eolian horizon, as well as subsurface cultural features, within the LOD.

The Phase IB survey did identify cultural features in TU N576 E539, TU N594 E559, and TU N570 E525. A total of eight additional 1.0-meter square excavation units (N568 E626, N569 E624, N569 E625, N570 E524, N571 E624, N575 E539, N575 E540, and N576 E540) were placed adjacent to these test units to further expose the horizontal and vertical limits of the features. In addition, four additional cultural features (Features 4, 5, 6, and 11) were exposed during the Phase II investigation of the LOD. Eight additional 1.0-meter square excavation units (N558 E545, N620.5 E588, N620.5 E590, N621 E589, N621.5 E588, N591 E589, N630 E629, and N631 E628.5) were required to further expose the horizontal and vertical limits of these features.

The continuation of a geomorphologic investigation in Area 1 was necessary to confirm the presence of possible eolian deposits and determine the vertical and horizontal extent of the eolian and gravelly Pleistocene soil horizons. The geomorphologic investigation consisted of the excavation of 13 1.0-meter square test units placed on the imposed grid within Area 1 outside of the LOD, and inspection of the test units excavated within the LOD. Six of the test units (N500 E589, N512 E509, N530 E589, N536 E526, N560 E589, and N680 E587) were placed on the same transects established within the LOD to maintain continuity. The surface collection and excavations conducted in the Phase IB Archaeological Survey identified a continuation of the possible eolian horizon beyond the area of LOD. These additional test units were used to identify the vertical and horizontal limits of the possible eolian horizon within Area 1. The remaining seven test units (N560 E590, N561 E589, N561 E590, N589 E620, N660 E519, N661 E584, and N690 E530) were placed outside of the LOD to sample areas exhibiting pebbly versus non-pebbly topsoil horizon, soil morphology in areas of low versus high artifact densities, and the soil profile in a concentration of shell noted in the plowzone horizon in the northwestern limits of Area 1.

Area 2. An area of historic archaeological remains was identified from Row 10 through Row 18 in Area 2 during the Phase IB Survey. Brick fragments and several nails were recovered in a concentration within these rows, suggesting that the remains of a structure might be present within the tested area. A post mold, Feature 1, was exposed in TU 5, located in Cell 15L, and found in the general area of the brick scatter. This historic artifact concentration corresponded to the location of a mid-twentieth-century concrete block and frame shed and two other ancillary frame structures as depicted on a 1963 Right-of-Way map of the Soulie Gray House property. The area was also judged to have the potential to contain subsurface deposits associated with mid-nineteenth- through early-twentieth-century outbuildings.

The Phase II fieldwork in Area 2 consisted of test unit excavations and plowzone stripping designed to expose any subsurface features associated with the possible outbuilding remains and mid-nineteenth- through early-twentieth-century yard deposits from the domestic occupation of the farm. A total of 13 1.0-meter square excavation units was excavated within the historic artifact concentration. The placement of these test units was established based on the suggested location of fence lines, building footprints, and other static historic landscape features as depicted by overlaying the 1963 Right-of-Way image onto the conceptual alignment. Based on the results of the test unit excavations, a series of six 30.0-meter long by 1.0-meter wide trenches was excavated between Row 10 and Row 18. The plowzone horizon was removed from within each trench to expose the subsoil and any cultural features. All cultural features exposed in the test trenches were mapped and excavated.

Area 5. The Phase I survey of the 3.0-hectare section of Area 5 identified three prehistoric and one historic artifact concentrations. Locus 1 consists of a 30.5-meter by 45.7-meter scatter of flakes found in the plowzone horizon in the eastern portion of the tested parcel. Locus 2 comprises a 61.0-meter by 30.5-meter concentration of debitage and two prehistoric ceramic sherds recovered from the plowzone and E-horizon. Locus 3, 30.5 meters by 15.2 meters, contained a small number of flakes found in the plowzone. Locus 4 consisted of a 30.5-meter by 30.5-meter scatter of creamware, pearlware, and redware sherds, a kaolin pipe bowl fragment, coal slag, brick, window glass, and bottle glass recovered from the plowzone horizon.

It was recommended by A.D. Marble & Company in a May 24, 2005 meeting with representatives of DelDOT, DESHPO, and Century Engineering that a Phase II Archaeological Investigation be conducted for Loci 2 and 4. Locus 2 produced a small number of lithic debitage and prehistoric ceramic sherds in the plowzone and E-horizon of STP N300 E700 and N300 E800 and possibly represented a continuation of Loci 3 or 4 identified in Area 1. The recovery of debitage in a silty E-horizon similar to the stratigraphic context of several prehistoric features in Area 1 suggested that Locus 2 might contain prehistoric subsurface features. The artifact assemblage in Locus 4 yielded an assortment of late eighteenth- through early-twentieth-century domestic, architectural, and personal items from the plowzone horizon. The limited horizontal distribution and absence of modern materials in the artifact collection of Locus 4 suggested that this concentration might represent a midden or a dump.

In a November 29, 2005 meeting with representatives of A.D. Marble & Company, DelDOT, and Century Engineering, DelDOT directed A.D. Marble & Company to focus the Phase II archaeological investigation of Locus 2 only within the LOD for the project. No testing of Locus 2 outside of the LOD was conducted. Approximately 90 percent of Locus 4 was found outside of the LOD. Given the extremely limited area of Locus 4 within the LOD, no Phase II testing was conducted in Locus 4.

To conduct the Phase II fieldwork in Area 5, a 125.0-meter long transect was extended along the proposed roadway centerline from the SR 1 right-of-way to an endpoint located on the N650 line, between the E850 and E900 line. Approximately 20.0 meters from the edge of the SR 1 right-of-way, a second, 60.0-meter long transect was established perpendicular to the baseline and across that portion of Locus 2 situated within the LOD. Two, 1.0-meter square excavation units (TU E and TU F) were placed 30.0 meters apart on the perpendicular baseline established across Locus 2. The primary function of these excavation units was to assist in determining the vertical, horizontal, and temporal extent of the cultural remains and to identify any possible eolian deposits, as well as to determine if the Locus 2 was eligible for National Register inclusion.

Concurrent with the Phase II fieldwork, a geomorphologic investigation was conducted in Area 5 to confirm the presence of possible eolian deposits and to determine the vertical and horizontal extent of the eolian and gravelly Pleistocene soil horizons. The geomorphologic investigation consisted of the excavation of four 1.0-meter square test units placed at 30.0-meter intervals on the March 2005 alternative centerline transect, and inspection of the test units excavated within Locus 2. The excavations conducted in the Phase IB survey identified a series of soil horizons in STPs N325 E800 and N325 E900, Locus 2, distinct from the typical Ap-, E-, and Bt-horizons encountered across the rest of Area 5. These atypical profiles were thought to possibly represent eolian deposits or cultural features.

Area 6. Twenty-two STPs and four 1.0-meter square test units were excavated during the July 2005 Phase IB archaeological survey of the extended limits of disturbance in the Soulie Gray House lot, designated as Area 6. A concentration of brick rubble and mid-eighteenth- through late-nineteenth-century domestic and architectural refuse was identified in STP N520 E500 and in TUs N519 E499 and N519 E500, approximately 30.0 meters north of the northern driveway entrance to the farm. This brick concentration, labeled Feature 3, was capped with a plowzone horizon and underlying fill deposits. Both soil horizons yielded brick fragments, creamware, slip trail and glazed redware, whiteware, window glass, cut nails, a slate pencil, and other domestic and architectural refuse. Feature 3 was thought to represent a midden deposit associated with the nineteenth-century occupation of the Soulie Gray Farm, or, given the feature's proximity to the drainage, an abandoned well that was infilled with rubble. Background research indicated that an early- to mid-eighteenth-century brick house had also been part of the farm, but there was no definitive evidence of this dwelling's location in relation to the Soulie Gray House and the current roadway alignment. However, there was the potential that Feature 3 might be associated with an early- to mid-eighteenth-century occupation of the property.

The Phase II fieldwork at the Soulie Gray House consisted of test unit excavations to expose the horizontal and vertical limits of the brick concentration. A total of five 1.0-meter square excavation units was excavated within the feature. The plowzone horizon was excavated and screened within each unit to expose Feature 3, and the feature fill removed.

Area 7. Six STPs and one 1.0-meter square test unit excavated during the July 2005 Phase IB archaeological testing of Area 7 yielded a 40.0-meter long by 20.0-meter wide concentration of prehistoric artifacts and early- to mid-nineteenth- through early-twentieth-century domestic and architectural refuse in the plowzone horizon. The prehistoric collection included 30 pieces of lithic debitage composed of jasper, quartz, and chert primary, secondary, and tertiary flakes.

Inspection of the soil profile noted that the lithic concentration was recovered from the plowzone horizon overlying a 10.0 to 30.0-centimeter thick silty E-horizon. No prehistoric artifacts were encountered in the underlying E-horizon within the concentration. A similar soil profile was noted in association with prehistoric artifacts in Locus 2 of the West Farm, as well as in several test units excavated within Area 1, suggesting a correlation between thicker deposits of the E-horizon and the potential for prehistoric features. The prehistoric resource identified in Area 7 was thought to represent a small lithic procurement/manufacturing resource that was part of a larger prehistoric site found in the project study area.

The Phase II fieldwork within the lithic concentration documented in the southeastern corner of Area 7 consisted of test unit excavations to expose the horizontal and vertical limits of the prehistoric artifact concentration. A total of four 1.0-meter square excavation units was excavated within the concentration. The primary function of these excavation units was to assist in determining the vertical, horizontal, and temporal extent of the cultural remains and any possible eolian deposits, and whether the site was eligible for National Register inclusion.

Concurrent with the Phase II fieldwork, a geomorphologic investigation of Area 7 consisted of the inspection of the test units excavated within the lithic concentration. The geomorphologic investigation of the prehistoric resource was conducted to identify the vertical and horizontal limits of the possible eolian horizon within the study area, as well as provide data concerning soil trends over the larger project area.

The standard test unit size for the Phase II investigation was 1.0-meter square. The Ap-horizon in all test units was excavated as one complete, natural level, with the remaining soil stratigraphy excavated in 10.0-centimeter levels within discernable, natural soil horizons. In Area 5, excavations in the Bt-horizon were reduced to a 50.0-centimeter square unit within the larger unit. Bt-horizon soils were excavated in 10.0-centmeter levels within the 50.0 centimeter square window in the floor of the unit. All test unit excavations did not exceed 1.5 meters in depth. All soils were screened through 0.64-centimeter hardware cloth, and all artifacts, regardless of age or cultural affiliation, retained. Soil profile information, including soil texture and color, was recorded on standardized forms. Scale drawings of unit soil profiles were drawn and photographed in black-and-white and digital formats. The site area and environs were also photographed. Test unit locations were plotted on scale maps of the APE. All excavations were backfilled upon completion of the Phase II investigation and the ground restored as close as possible to original condition.

Features were exposed to the fullest extent possible within the study area. Features were mapped and photographed in plan view prior to excavation, then appropriately sampled. Features were bisected along their longest axis and one half excavated in 10.0-centimeter arbitrary levels. In the case of Features 5 and 5A in Area 1, the feature soils were excavated in 5.0-centimeter arbitrary levels. The feature profiles were drawn and photographed, and the remaining half of the features excavated. Soils in historic-period features were screened though 0.64-centimeter hardware cloth in order to recover all artifacts. Prehistoric-period feature soils were screened through 0.31-centimeter hardware cloth to recover microflakes and very small lithic artifacts that would pass through larger diameter screen. Soil samples 1.5- to 2.0-liter in volume were taken from all features identified during the Phase II investigation. Final mapping and photography was completed after the feature was excavated. All feature locations were plotted on a scale map of the project study area.

7.2.2 Laboratory Methods

All artifacts recovered from the field were processed in the laboratory. The bags of artifacts collected in the field were inventoried and subjected to preliminary sorting. A computerized database categorizing all recovered artifacts by functional group was created. The Laboratory Manager supervised all operations in the laboratory. The remaining laboratory work included artifact preparation and cataloging. All artifacts recovered from the field were cleaned. Artifacts were removed from their respective bags, wet or dry washed, and returned to clean bags with new provenience tags. All artifacts were cataloged and entered into a relational database with appropriate fields for provenience, artifact type, counts, material, and attributes, as required.

Artifact analyses included an examination of site distribution, material types, and function. The sample size included all prehistoric and historic artifacts collected from the Phase II investigation of the respective areas/resources, as well as those collected during Phase IB excavations. Recovered historic period material was cataloged using a variant of Stanley South's functional classification scheme and analyzed for chronological attributes (South 1977). The functional categories enabled artifact material to be sorted and analyzed by use and compared to the assemblage for identification of possible activity areas within the site. All artifacts were classified by functional class and materials as per current historical material culture studies. Glass color and decorative treatment were also noted when present.

Cataloging and analysis of the prehistoric artifact assemblage was conducted with the intention of determining the technological and functional characteristics of the collection relative to the temporal, spatial, and environmental aspects of the site. The technological aspect of this study focused on determining the means and methods employed to produce the artifacts. Distinctive characteristics associated with production and reduction activities were recorded. The functional portion of this study sought to reveal how, and for what purpose, these artifacts were used. Function was determined through the examination of both morphology and use-wear patterns. Diagnostic tool forms and ceramic types were identified in the collection and used as markers to distinguish specific periods of activity within the vertical and horizontal limits of the APE. The technological, functional, and temporal characteristics of the artifact assemblage were then considered when attempting to understand and evaluate how the environment affected the occupants of the study area. This information was used to identify the types of activities taking place in the project study area, the source of raw resources, possible trading/migration patterns inferred by the raw resources used by the inhabitants, and the technology employed in tool manufacture.

The seven 1.5- to 2.0-liter feature soil samples recovered from the Phase II archaeological investigation were processed through fine-screen flotation tanks. Cultural and organic materials were separated by light and heavy fractions in the flotation process. Light and heavy fractions were air-dried and returned to clean bags with new provenience tags. Floated materials were sent to Nancy Asch Sidell for separation into various subgroups, including, but not limited to, lithic materials, seeds, nuts, bones, ceramics, and non-cultural materials (gravels, roots, etc.). Floral material, including seeds and nuts, were classified by genus and species, if possible. All floral remains were to be examined for evidence of food preparation activities, including grinding, cutting, and burning.

The final task for laboratory work was the preparation of all artifacts and paperwork related to this project for curation at the DSM. Artifacts were processed in accordance with the DSM's *Guidelines and Standards for the Curation of Archaeological Collections*, dated October 2001. This included labeling all artifacts over a specified size and the use of acid-free paper to provenience all bags of artifacts. All paperwork produced by the project was copied on acid-free paper to be delivered together with the photographs and artifacts for permanent curation at the DSM. Curated materials are to be delivered by A.D. Marble & Company to the DSM storage upon acceptance of the final draft version of the combined Phase I/II report.